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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/822,942 | 03/30/2001 | Yoshiaki Takahashi | 33463 | 6590 |

116 7590 01/15/2004

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EXAMINER

BASINGER, SHERMAN D

ART UNIT

PAPER NUMBER

3617

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------|------------------------------------------------------------------------|--|
| Office Action Summary | Application No. 09/822,942 | Applicant(s) SW TAKAHASHI ET AL. | |
| | Examiner Sherman D. Basinger | Art Unit 3617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-21 is/are pending in the application.
- 4a) Of the above claim(s) 3-7, 12, 13 and 19-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-11 and 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 3-7, 12, 13 and 19-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

Claim Objections

2. Claim 11 is objected to because of the following informalities: "have a -shape" is unclear. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 8-11 and 14-18 rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi 22152, figures 14A-15B.

The negative region is described in paragraph [0199], last 9 lines. The gaseous space is 421.

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With regard to "exerting inertial force on the gas bubbles at the negative region in a direction so as to detach the bubbles from a gas/liquid interface by providing the gas/liquid interface at a smoothly curved water passage" attention is directed toward [0203]. The agitating effects referenced in this paragraph produce the inertial force.

The fluid guiding passage for directing a gas from the gaseous space to the negative pressure region is 435b and 435c.

The flow guiding body disposed on a ship side of the wing is 435a. The wing is 438. The struts are 436 and 437.

The flow guiding body which follows a shape of the wing is 435a.

The wing 438 is considered to have a "-shape".

The wing generates a circulating flow Γ as is shown in figure 15A.

The wing creates an uplifting force as disclosed in paragraph [0204].

Response to Arguments

5. The rejection of claims 8, 9 and 14-17 under 35 U.S.C. 102 (e) with Takahashi 97971 has been withdrawn in view of applicant's arguments presented on page 13, lines 10-end and page 14, lines 1-5 of the response filed November 19, 2003.

6. The rejection of claims 8-11 and 14-18 under 35 U.S.C. 102 (e) with Takahashi 22152 stands. Applicant's arguments are not persuasive with respect to this rejection. Nor do the amendments to the above claims overcome the rejections.

Applicant amended the claims to add language similar to "exerting inertial force on the gas bubbles at the negative region in a direction so as to detach the bubbles from a gas/liquid interface by providing the gas/liquid interface at a smoothly curved water passage". This limitation is anticipated by Takahashi 22152 in paragraph [0203]. The agitating effects referenced in this paragraph produce the inertial force.

Applicant argues that every limitation of the above claims is not taught by the reference. Specifically, applicant argues that because of the level difference between shell plate 62 and the ends of inclined surface 435a, the water channel (439) abruptly changes direction at each end of the inclined surface 435a, not being smoothly curved as presently claimed.

In rebuttal, the limitation added to the claims requires the provision of the gas/liquid interface at a smoothly curved water passage. It is urged that water passage 439 is a smoothly curved water passage as shown in figure 14A, 15A and 15B. The water passage 439 is **only** within wing body 422. This passage within wing body 422 is

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smoothly curved. This passage does not include the areas of shell plate 62 adjacent body 422.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

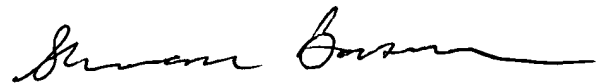
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherman D. Basinger whose telephone number is 703-308-1139. The examiner can normally be reached on M-F (6:00-2:30 ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.



Sherman D. Basinger
Primary Examiner
Art Unit 3617

1/13/03

Sdb
1/13/04